INSTALLATION

TW3000P Series Passive Multi-Channel Video Transceivers

C1662M-A (1/06)

Description

The TW3000 Series multi-channel video transceivers can transmit multiple video signals over unshielded twisted pair (UTP) cable. The receivers are passive and require no power. The transceivers are available with 8, 16, or 32 channels and can be mounted into an industry standard 19-inch (48.26 cm) wide equipment rack. Each model has built-in surge suppression.

The transceivers can be used at the camera and/or monitoring location. They allow for easy connectivity with any video source or destination device, such as cameras, monitors, and matrix switchers. These multi-channel transceivers will transmit video (color/black and white) and Coaxitron® (up the coax) PTZ control signals on the same pair of UTP wires.

MODELS

TW3008P	8-channel passive video transceiver
TW3016P	Same as TW3008, except 16 channels
TW3032P	Same as TW3008, except 32 channels

BACK VIEW

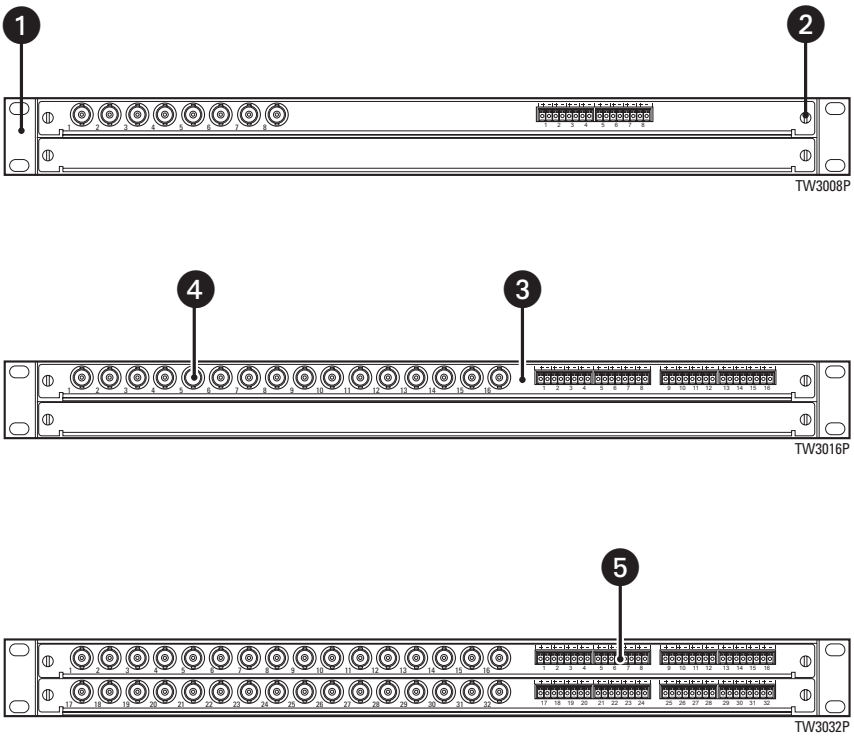

Figure 1. Back View of TW3008P, TW3016P, TW3032P

1. **Rack Ears:** Allow mounting into an industry standard 19-inch wide equipment rack.
2. **Thumbscrews:** Allow back panels to be removed.
3. **Panel with Connectors:** The TW3008P and TW3016P have one blank panel.
4. **BNC Connectors:** The TW3008P, TW3016P, and TW3032P have 8, 16, and 32 BNC connectors, respectively.
5. **Screw Terminal Connectors:** The TW3008P, TW3016P, and TW3032P have 2, 4, and 8 screw terminal connectors, respectively. Each screw terminal connector allows for the connection of four UTP wire pairs.

Installation

Make sure all parts are present for the units.

TW3008P

4 Rack mount screws, 10-32 x 0.750-inch, Phillips, pan head (U.S.)
4 Rack mount screws, M6 x 1, 20 mm
4 Washers
2 Screw Terminal Connectors

TW3016P

4 Rack mount screws, 10-32 x 0.750-inch, Phillips, pan head (U.S.)
4 Rack mount screws, M6 x 1, 20 mm
4 Washers
4 Screw Terminal Connectors

TW3032P

4 Rack mount screws, 10-32 x 0.750-inch, Phillips, pan head (U.S.)
4 Rack mount screws, M6 x 1, 20 mm
4 Washers
8 Screw Terminal Connectors

MOUNTING

The TW3008P, TW3016P, and TW3032P transceivers are 1 RU (1.75") high and are supplied with the necessary parts for mounting into an industry standard 19-inch (48.26 cm) wide equipment rack. The units can also be placed on a flat surface, such as a shelf.

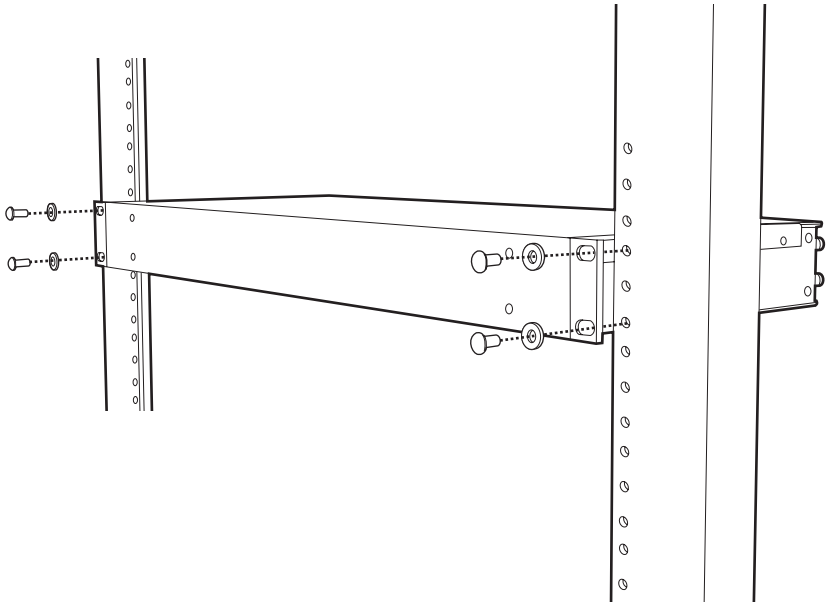

Figure 2. Rack Mounting

APPLICATIONS

Figures 3-6 show how to use the transceivers in various applications. Always connect + to + and – to –. The TW3032P is used as an example in Figures 3-6.

Table A shows the distance in feet with coaxitron or video only when using a particular type of Cat cable. Table B shows the maximum allowable wire gauge for single wire and stranded wire.

Table A. Cable Distance

Cable Type	Distance (with Coaxitron)	Distance (video only)
Cat3	300 ft	400 ft
Cat5	500 ft	650 ft
Cat5e	750 ft	750 ft
Cat6	750 ft	750 ft

NOTE: Cat5e cable is recommended for optimum video performance.

Table B. Wire Gauge

Wire Gauge (maximum allowable)	
Single Wire (solid)	24 AWG (1.5 mm^2)
Stranded Wire (flexible)	24 AWG (1.0 mm^2)

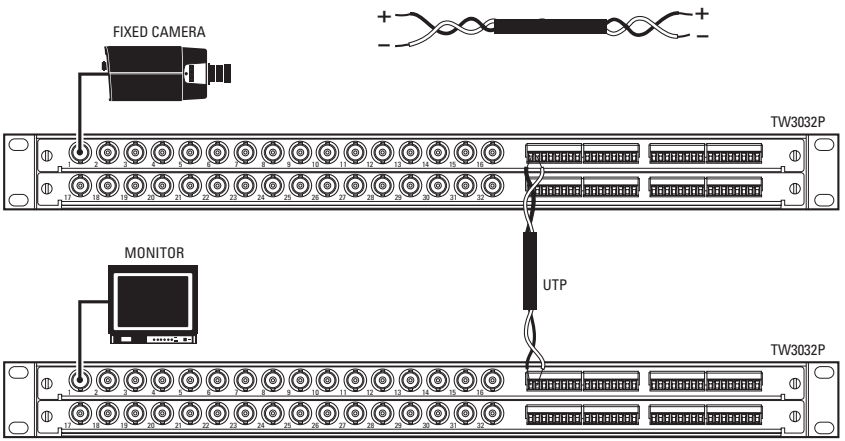

Figure 3. Connecting Two Transceivers

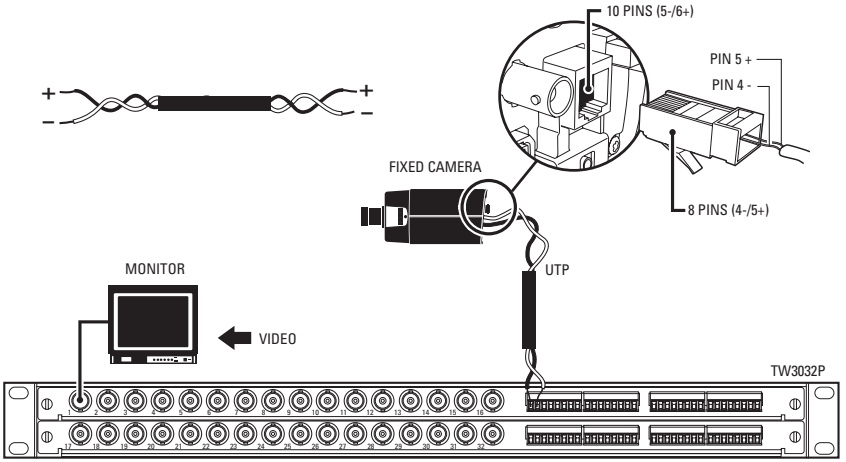

Figure 4. Connecting a UTP Camera to a UTP Receiver

NOTE: UTP cameras have a 10-pin RJ-45 connector. Standard RJ-45 connectors have 8 pins.

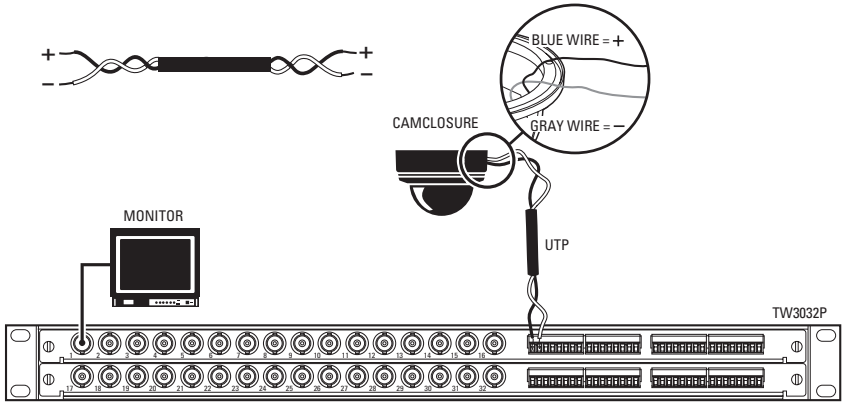

Figure 5. UTP Camclosure to UTP Receiver

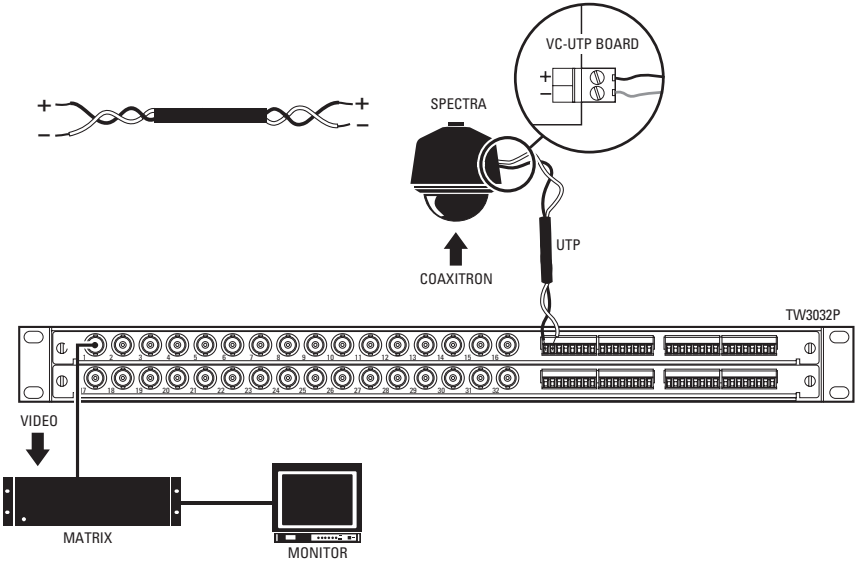

Figure 6. Coaxitron PTZ Control

REPLACING A BACK PANEL

You can replace a blank back panel or a back panel with connectors easily. Figure 7 shows a blank panel being removed after the two thumbscrews are loosened. The panels with connectors can be removed the same way.

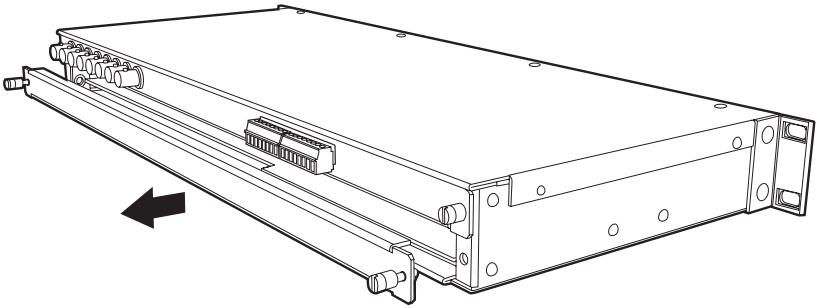

Figure 7. Back Panel Replacement

Specifications

ELECTRICAL

Power Source	No power required
Wire Type	Unshielded twisted pair (24 AWG maximum)
Wire Category	Cat3 or better
Wire Impedance	100 ohms +/– 20%
Wire Distance	750 feet maximum
DC Loop Resistance	52 ohms per 1,000 feet
Differential Capacitance	19pF/ft max
Transient Immunity	300 W peak pulse power (8/20 US)
Insertion Loss	72 dB over; 0-8 MHz frequency range

VIDEO CHARACTERISTICS

Video Input/Output	One BNC; internally terminated in 75 ohms
Format	NTSC, PAL, SECAM
Frequency Response	DC to 10 MHz
Common Mode/Differential Mode Rejection	>60 dB typical

MECHANICAL

Connectors	
BNC	Video input/output
Screw Terminal	UTP input/output
Construction	Aluminum
Finish	Black

GENERAL

Operating Temperature	-40° to 185°F (-40° to 85°C)
Relative Humidity	0 to 90%, noncondensing
Data Transmission	Supports Coaxitron up to 750 feet
Dimensions	1.75" H x 17.50" W x 7.00" D (4.44 x 44.45 x 17.78 cm)
Unit Weight	
TW3008P	2.94 lb (1.33 kg)
TW3016P	3.10 lb (1.41 kg)
TW3032P	4.42 lb (2.00 kg)

This equipment contains electrical or electronic components that must be recycled properly to comply with Directive 2002/96/EC of the European Union regarding the disposal of waste electrical and electronic equipment (WEEE). Contact your local dealer for procedures for recycling this equipment.

PRODUCT WARRANTY AND RETURN INFORMATION

WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship **for a period of one year** after the date of shipment.

Exceptions to this warranty are as noted below:

- Five years on FT/FR8000 Series fiber optic products.
- Three years on Genex® Series products (multiplexers, server, and keyboard).
- Three years on Camclosure® and fixed camera models, except the CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models, which have a five-year warranty.
- Two years on standard motorized or fixed focal length lenses.
- Two years on Legacy®, CM6700/CM6800/CM9700 Series matrix, and DF5/DF8 Series fixed dome products.
- Two years on Spectra®, Esprit®, ExSite™, and PS20 scanners, including when used in continuous motion applications.
- Two years on Esprit® and WW5700 Series window wiper (excluding wiper blades).
- Two years (except lamp and color wheel) on Digital Light Processing (DLP®) displays. The lamp and color wheel will be covered for a period of 90 days. The air filter is not covered under warranty.
- Eighteen months on DX Series digital video recorders, NVR300 Series network video recorders, Endura™ Series distributed network-based video products, and TW3000 Series twisted pair transmission products.
- One year (except video heads) on video cassette recorders (VCRs). Video heads will be covered for a period of six months.
- Six months on all pan and tilts, scanners or preset lenses used in continuous motion applications (that is, preset scan, tour and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to Pelco, Clovis, California. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental or consequential damages (including loss of use, loss of profit and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, Sales Order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product which does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

RETURNS

In order to expedite parts returned to the factory for repair or credit, please call the factory at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair).

All merchandise returned for credit may be subject to a 20% restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid. Ship to the appropriate address below.

If you are located within the continental U.S., Alaska, Hawaii or Puerto Rico, send goods to:

Service Department
Pelco
3500 Pelco Way
Clovis, CA 93612-5699

If you are located outside the continental U.S., Alaska, Hawaii or Puerto Rico and are instructed to return goods to the USA, you may do one of the following:

If the goods are to be sent by a COURIER SERVICE, send the goods to:

Pelco
3500 Pelco Way
Clovis, CA 93612-5699 USA

If the goods are to be sent by a FREIGHT FORWARDER, send the goods to:

Pelco c/o Expeditors
473 Eccles Avenue
South San Francisco, CA 94080 USA
Phone: 650-737-1700
Fax: 650-737-0933

REVISION HISTORY

Manual #	Date	Comments
C1662M	12/05	Original version.
C1662M-A	1/06	Revised Table A.

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Worldwide Headquarters
3500 Pelco Way
Clovis, California 93612 USA

USA & Canada
Tel: 800/289-9100
Fax: 800/289-9150
International
Tel: 1-559/292-1981
Fax: 1-559/348-1120

www.pelco.com

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